

# Other Metal Valve and Pipe Fitting Manufacturing: 2002

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## 2002 Economic Census

*Manufacturing*

Industry Series



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U.S. Department of Commerce  
Economics and Statistics Administration  
U.S. CENSUS BUREAU



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-- Not applicable for this report.

**Table 1. Historical Statistics for the Industry: 2002 and Earlier Years**

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry and year <sup>1</sup>	Com- panies <sup>2</sup>	All estab- lish- ments <sup>3</sup>	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expendi- tures (\$1,000)	
			Number <sup>4</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)					
332919, Other metal valve and pipe fitting manufacturing .....	2002..	234	255	15 533	546 280	11 463	22 343	332 905	1 361 952	1 122 990	2 489 878	'87 803
	2001..	N	N	16 075	564 666	11 788	23 205	345 026	1 404 030	1 156 004	2 575 307	93 405
	2000..	N	N	16 055	551 011	11 956	23 976	340 220	1 419 639	1 116 626	2 508 379	94 232
	1999..	N	N	16 316	542 140	12 111	24 072	334 575	1 454 469	1 060 466	2 511 141	97 041
	1998..	N	N	17 051	540 297	12 405	25 619	346 268	1 533 061	1 209 157	2 649 782	102 685
	1997..	220	243	18 538	591 235	13 729	28 398	376 288	602 620	1 224 207	2 806 800	108 570

<sup>1</sup>Statistics presented for years ending in 2 and 7 are census data. Interim census years are derived in a representative sample of manufacturing establishments canvassed in the Annual Survey of Manufactures (ASM).

<sup>2</sup>For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

<sup>3</sup>Includes establishments with payroll at any time during the year.

<sup>4</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 2. Industry Statistics for Selected States: 2002**

[States that are a disclosure or with less than 100 employees are not shown. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E <sup>1</sup>	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
		Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>3</sup>	Hours (1,000)	Wages (\$1,000)				
<b>332919, Other metal valve and pipe fitting manufacturing</b>												
United States .....	2	255	132	15 533	546 280	11 463	22 343	332 905	1 361 952	1 122 990	2 489 878	'87 803
California .....	2	17	7	564	21 309	428	894	16 009	54 376	33 125	84 886	'638
Illinois .....	2	18	13	949	43 053	644	1 364	23 522	74 873	76 552	155 182	'3 501
New York .....	4	8	6	622	22 397	420	792	12 534	49 384	28 336	74 689	'1 411
Ohio .....	3	18	10	1 070	41 173	770	1 566	23 815	110 098	68 944	178 093	'8 328
Pennsylvania .....	—	21	11	2 764	82 065	1 967	4 541	49 725	167 039	137 209	303 936	'10 565
South Carolina .....	1	7	6	692	24 618	561	1 181	17 519	62 790	89 965	152 987	'4 399
Texas .....	3	49	27	1 875	68 392	1 473	2 880	42 602	172 231	134 381	305 550	'11 638

<sup>1</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1—10 to 19 percent; 2—20 to 29 percent; 3—30 to 39 percent; 4—40 to 49 percent; 5—50 to 59 percent; 6—60 to 69 percent; 7—70 to 79 percent; 8—80 to 89 percent; 9—90 percent or more.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

**Table 3. Detailed Statistics by Industry: 2002**

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Item	Value
<b>332919, Other metal valve and pipe fitting manufacturing</b>	
Companies <sup>1</sup> .....	number.. 234
All establishments <sup>2</sup> .....	number.. 255
Establishments with 1 to 19 employees .....	number.. 123
Establishments with 20 to 99 employees .....	number.. 93
Establishments with 100 employees or more .....	number.. 39
All employees <sup>3</sup> .....	number.. 15 533
Total compensation .....	\$1,000.. 687 330
Annual payroll .....	\$1,000.. 546 280
Total fringe benefits .....	\$1,000.. 141 050
Production workers, average for year .....	number.. 11 463
Production workers on March 12 .....	number.. 11 457
Production workers on May 12 .....	number.. 11 638
Production workers on August 12 .....	number.. 11 490
Production workers on November 12 .....	number.. 11 220
Production worker hours .....	1,000.. 22 343
Production worker wages .....	\$1,000.. 332 905
Total cost of materials .....	\$1,000.. 1 122 990
Materials, parts, containers, packaging, etc., used .....	\$1,000.. 935 421
Resales .....	\$1,000.. 128 676
Purchased fuels .....	\$1,000.. 10 649
Purchased electricity .....	\$1,000.. 27 104
Contract work .....	\$1,000.. 21 140
Quantity of electricity purchased for heat and power .....	1,000 kWh.. 491 438
Quantity of electricity generated less sold for heat and power .....	1,000 kWh.. S
Total value of shipments .....	\$1,000.. 2 489 878
Primary products value of shipments .....	\$1,000.. 2 093 880
Secondary products value of shipments .....	\$1,000.. 198 544
Total miscellaneous receipts .....	\$1,000.. 197 454
Value of resales .....	\$1,000.. 176 920
Contract receipts .....	\$1,000.. 9 961
Other miscellaneous receipts .....	\$1,000.. 10 573
Primary products specialization ratio .....	percent.. 91
Value of primary products shipments made in all industries .....	\$1,000.. 2 536 104
Value of primary products shipments made in this industry .....	\$1,000.. 2 093 880
Value of primary products shipments made in other industries .....	\$1,000.. 442 224
Coverage ratio .....	percent.. 83
Value added .....	\$1,000.. 1 361 952
Total inventories, beginning of year .....	\$1,000.. 436 753
Finished goods inventories .....	\$1,000.. 228 602
Work-in-process inventories .....	\$1,000.. 68 258
Materials and supplies inventories .....	\$1,000.. 139 893
Total inventories, end of year .....	\$1,000.. 435 100
Finished goods inventories .....	\$1,000.. 222 276
Work-in-process inventories .....	\$1,000.. 69 648
Materials and supplies inventories .....	\$1,000.. 143 176
Gross value of depreciable assets (acquisition costs) at beginning of year .....	\$1,000.. <sup>1</sup> 157 827
Total capital expenditures (new and used) .....	\$1,000.. <sup>87</sup> 803
Buildings and other structures (new and used) .....	\$1,000.. <sup>8</sup> 925
Machinery and equipment (new and used) .....	\$1,000.. <sup>78</sup> 878
Automobiles, trucks, etc., for highway use .....	\$1,000.. <sup>3</sup> 324
Computers and peripheral data processing equipment .....	\$1,000.. <sup>8</sup> 044
All other expenditures for machinery and equipment .....	\$1,000.. <sup>67</sup> 510
Total retirements .....	\$1,000.. <sup>35</sup> 605
Gross value of depreciable assets at end of year .....	\$1,000.. <sup>1</sup> 210 025
Depreciation charges during year .....	\$1,000.. <sup>81</sup> 600
Total rental payments .....	\$1,000.. 27 873
Buildings and other structures .....	\$1,000.. 18 372
Machinery and equipment .....	\$1,000.. 9 501
Total other expenses <sup>4</sup> .....	\$1,000.. 230 259
Response coverage ratio <sup>5</sup> .....	percent.. 83
Repair and maintenance services of buildings and/or machinery <sup>4</sup> .....	\$1,000.. 14 438
Communications services <sup>4</sup> .....	\$1,000.. 5 001
Legal services <sup>4</sup> .....	\$1,000.. 2 953
Accounting, auditing, and bookkeeping services <sup>4</sup> .....	\$1,000.. 3 023
Advertising and promotional services <sup>4</sup> .....	\$1,000.. 6 451
Expensed computer hardware and supplies and purchased computer services <sup>4</sup> .....	\$1,000.. 3 592
Refuse removal (including hazardous waste) services <sup>4</sup> .....	\$1,000.. 2 475
Management consulting and administrative services <sup>4</sup> .....	\$1,000.. 7 477
Taxes and license fees <sup>4</sup> .....	\$1,000.. 16 491
All other expenses <sup>4</sup> .....	\$1,000.. 138 896

<sup>1</sup>For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

<sup>4</sup>Based on Annual Survey of Manufactures (ASM) sample data.

<sup>5</sup>A response coverage ratio is derived for this item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight) for those Annual Survey of Manufactures (ASM) establishments that reported to the weighted total employment for all ASM establishments classified in this industry.

Note 1: The amounts shown for other expenses reflect only those services that establishments purchase from other companies.

Note 2: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 4. Industry Statistics by Employment Size: 2002**

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Employment size class	E <sup>1</sup>	All establishments <sup>2</sup>	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>3</sup>	Hours (1,000)	Wages (\$1,000)				
332919, Other metal valve and pipe fitting manufacturing											
All establishments .....	2	255	15 533	546 280	11 463	22 343	332 905	1 361 952	1 122 990	2 489 878	'87 803
Establishments with—											
1 to 4 employees .....	8	57	126	4 645	97	182	2 647	11 872	7 072	18 842	'721
5 to 9 employees .....	7	36	249	9 873	182	367	5 531	25 352	16 093	41 214	'750
10 to 19 employees .....	7	30	447	17 306	340	672	9 590	48 695	35 749	85 868	'2 058
20 to 49 employees .....	2	51	1 641	61 803	1 197	2 377	37 348	151 382	108 333	254 276	'10 384
50 to 99 employees .....	4	42	3 037	106 422	2 323	4 594	64 296	286 468	200 707	486 514	'22 482
100 to 249 employees .....	1	28	4 781	177 660	3 521	6 575	112 007	479 381	390 559	866 212	'24 224
250 to 499 employees .....	—	7	2 062	74 391	1 287	2 531	41 642	123 409	165 006	304 269	'8 690
500 to 999 employees .....	2	4	3 190	94 180	2 516	5 045	59 844	235 393	199 471	432 683	'18 494
1,000 to 2,499 employees .....	—	—	—	—	—	—	—	—	—	—	—
2,500 employees or more .....	—	—	—	—	—	—	—	—	—	—	—
Administrative records <sup>4</sup> .....	9	84	665	26 148	548	1 077	15 371	69 547	40 863	110 410	'2 269

<sup>1</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1—10 to 19 percent; 2—20 to 29 percent; 3—30 to 39 percent; 4—40 to 49 percent; 5—50 to 59 percent; 6—60 to 69 percent; 7—70 to 79 percent; 8—80 to 89 percent; 9—90 percent or more.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

<sup>4</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 5. Industry Statistics by Primary Product Class Specialization: 2002**

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry or product class code	Industry or primary product class	All establishments <sup>1</sup>	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number <sup>2</sup>	Payroll (\$1,000)	Number <sup>2</sup>	Hours (1,000)	Wages (\$1,000)				
332919	Other metal valve and pipe fitting manufacturing .....	255	15 533	546 280	11 463	22 343	332 905	1 361 952	1 122 990	2 489 878	'87 803
3329191	Plumbing and heating valves and specialties, except plumbers' brass goods .....	26	2 588	85 455	1 950	3 900	54 554	248 319	238 415	488 976	'22 982
3329194	Metal fittings, flanges, and unions for piping systems .....	104	10 451	370 278	7 717	14 696	224 505	889 717	752 787	1 648 994	'57 335

<sup>1</sup>Includes establishments with payroll at any time during the year.

<sup>2</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 6a. **Products Statistics: 2002 and 1997**

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)
332919	Other metal valve and pipe fitting manufacturing .....	2002.. N 1997.. N	X X	X X	2 536 104 2 619 007
3329191	Plumbing and heating valves and specialties, except plumbers' brass goods .....	2002.. N 1997.. N	X X	X X	527 423 541 652
33291911	Metal aerosol valves .....	2002.. N 1997.. N	X X	X X	145 830 146 728
3329191101	Metal aerosol valves .....	2002.. 19 1997.. 13	X X	X X	145 830 146 728
33291912	Plumbing and heating valves, including specialties and parts .....	2002.. N 1997.. N	X X	X X	381 593 389 598
3329191203	Plumbing and heating check valves, except plumbers' brass goods .....	2002.. 10 1997.. 13	X X	X X	39 832 43 298
3329191207	Plumbing and heating valve specialties, except plumbers' brass goods .....	2002.. 16 1997.. 16	X X	X X	206 312 213 197
3329191205	All other plumbing and heating valves (less than 125 lb w.s.p.), except plumbers' brass goods .....	2002.. 18 1997.. 15	X X	X X	121 243 D
3329191209	Parts for plumbing and heating valves and specialties, except plumbers' brass goods .....	2002.. 7 1997.. 7	X X	X X	14 206 D
3329191Y	Plumbing and heating valves and specialties, except plumbers' brass goods, nsk .....	2002.. N 1997.. N	X X	X X	— 5 326
3329191YV	Plumbing and heating valves and specialties, except plumbers' brass goods, nsk .....	2002.. N 1997.. N	X X	X X	— 5 326
3329194	Metal fittings, flanges, and unions for piping systems .....	2002.. N 1997.. N	X X	X X	1 731 872 N
33291941	Iron fittings, flanges, and unions for piping systems, including gray, malleable and ductile types .....	2002.. N 1997.. N	X X	X X	464 847 N
3329194101	Gray iron fittings, flanges, and unions for piping systems .....	2002.. 14 1997.. N	X X	X X	144 671 N
3329194103	Gray iron grooved fittings and couplings for piping systems .....	2002.. 3 1997.. N	X X	X X	D N
3329194108	Metal fittings, grooved fittings, flangs, and unions for piping systems .....	2002.. 17 1997.. N	X X	X X	136 641 N
3329194109	Malleable iron unions and union fittings for piping systems .....	2002.. 2 1997.. N	X X	X X	D N
3329194111	Ductile iron fittings, flanges, and unions for piping systems .....	2002.. 3 1997.. N	X X	X X	D N
3329194113	Ductile iron grooved fittings and couplings for piping systems .....	2002.. 5 1997.. N	X X	X X	60 311 N
33291942	Copper, copper alloy brass and bronze fittings, flanges, and unions for piping systems, including solder and threaded types .....	2002.. N 1997.. N	X X	X X	447 409 N
3329194215	Cast brass or bronze fittings, flanges, and unions for piping systems, including solder and threaded types .....	2002.. 19 1997.. N	X X	X X	93 997 N
3329194217	Wrought copper and wrought copper alloy fittings, flanges, and unions for piping systems, including solder and threaded types .....	2002.. 7 1997.. N	X X	X X	353 412 N
33291943	Cast and forged carbon, alloy, stainless steel, and other metal fittings, flanges, and unions .....	2002.. N 1997.. N	X X	X X	819 033 N
3329194319	Cast carbon and alloy steel fittings, flanges, and unions for piping systems .....	2002.. 3 1997.. N	X X	X X	D N
3329194321	Forged carbon, alloy, and stainless steel fittings, flanges, and unions for piping systems, including socket-weld or threaded-type .....	2002.. 17 1997.. N	X X	X X	125 000 N
3329194323	Forged carbon steel butt-welding type flanges for piping systems .....	2002.. 3 1997.. N	X X	X X	D N
3329194325	Forged alloy steel butt-welding type flanges for piping systems .....	2002.. 2 1997.. N	X X	X X	D N
3329194327	Forged stainless steel butt-welding type flanges for piping systems .....	2002.. 4 1997.. N	X X	X X	10 188 N
3329194329	Forged carbon steel butt-welding type fittings for piping systems .....	2002.. 5 1997.. N	X X	X X	2 887 N
3329194331	Forged alloy steel butt-welding type fittings for piping systems .....	2002.. 3 1997.. N	X X	X X	1 731 N
3329194333	Forged stainless steel butt-welding type fittings for piping systems .....	2002.. 10 1997.. N	X X	X X	27 790 N
3329194335	Metal pipe couplings .....	2002.. 21 1997.. N	X X	X X	169 759 N
3329194336	Fire hose nozzles .....	2002.. 3 1997.. N	X X	X X	D N
3329194337	Other metal fittings, flanges, and unions, including metal framing and fittings for mechanical and electrical supports .....	2002.. 36 1997.. N	X X	X X	247 086 N
3329194338	Other metal valves and pipe fittings .....	2002.. 32 1997.. N	X X	X X	199 043 N
3329194Y	Metal fittings, flanges, and unions for piping systems, nsk .....	2002.. N 1997.. N	X X	X X	583 N

See footnotes at end of table.



Table 6a. **Products Statistics: 2002 and 1997—Con.**

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)
332919	Other metal valve and pipe fitting manufacturing—Con.				
3329194	Metal fittings, flanges, and unions for piping systems—Con.				
3329194Y	Metal fittings, flanges, and unions for piping systems, nsk—Con.				
3329194YWV	Metal fittings, flanges, and unions for piping systems, nsk .....	2002.. N	X	X	583
		1997.. N	X	X	N
332919W	Other metal valve and pipe fitting manufacturing, nsk, total .....	2002.. N	X	X	276 809
		1997.. N	X	X	264 093
332919WY	Other metal valve and pipe fitting manufacturing, nsk, total .....	2002.. N	X	X	276 809
		1997.. N	X	X	264 093
332919WYWW	Other metal valve and pipe fitting manufacturing, nsk, for nonadministrative-record establishments .....	2002.. N	X	X	214 366
		1997.. N	X	X	220 443
332919WYWY	Other metal valve and pipe fitting manufacturing, nsk, for administrative-record establishments .....	2002.. N	X	X	62 443
		1997.. N	X	X	43 650

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 6b. Product Class Shipments for Selected States: 2002 and 1997**

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 2002. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographic definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS product class code	Product class and geographic area	Value of product shipments (\$1,000)
3329191	Plumbing and heating valves and specialties, except plumbers' brass goods	
	United States ..... 2002 ..	527 423
	..... 1997 ..	541 652
	California ..... 2002 ..	14 003
	..... 1997 ..	16 856
	New York ..... 2002 ..	16 109
	..... 1997 ..	8 691
	Pennsylvania ..... 2002 ..	24 687
	..... 1997 ..	87 490
	Texas ..... 2002 ..	61 009
	..... 1997 ..	N
3329194	Metal fittings, flanges, and unions for piping systems	
	United States ..... 2002 ..	1 731 872
	..... 1997 ..	N
	California ..... 2002 ..	66 786
	..... 1997 ..	N
	Illinois ..... 2002 ..	116 814
	..... 1997 ..	N
	New York ..... 2002 ..	32 508
	..... 1997 ..	N
	Ohio ..... 2002 ..	75 586
	..... 1997 ..	N
	Pennsylvania ..... 2002 ..	290 616
	..... 1997 ..	N
	South Carolina ..... 2002 ..	53 307
	..... 1997 ..	N
	Texas ..... 2002 ..	218 669
	..... 1997 ..	N

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

**Table 7. Materials Consumed by Kind: 2002 and 1997**

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Material code	Material consumed	Quantity	Delivered cost (\$1,000)
332919	Other metal valve and pipe fitting manufacturing		
00900001	Total materials .....2002..	X	935 421
	.....1997..	X	986 123
33272203	Metal bolts, nuts, screws, washers, rivets, and other screw machine products .....2002..	X	16 552
	.....1997..	X	23 900
332000AC	Metal stampings .....2002..	X	3 802
	.....1997..	X	4 811
33290003	Valves, fittings, and couplings purchased for further assembly (excluding forgings) .....2002..	X	92 163
	.....1997..	X	94 558
33200029	Other fabricated metal products (excluding forgings, metal stampings, valves, fittings, couplings, bolts, nuts, screws, washers, rivets, and other screw machine products) .....2002..	X	21 966
	.....1997..	X	23 775
33151101	Iron castings (rough and semifinished) .....2002..	X	29 679
	.....1997..	X	34 779
33151009	Steel castings (rough and semifinished) .....2002..	X	22 535
	.....1997..	X	38 886
33152005	Aluminum and aluminum-base alloy castings (rough and semifinished) .....2002..	X	D
	.....1997..	X	7 261
33152500	Copper and copper-base alloy castings (rough and semifinished) .....2002..	X	34 859
	.....1997..	X	37 229
33152009	Other nonferrous castings (rough and semifinished) .....2002..	X	3 971
	.....1997..	X	3 956
33211101	Iron and steel forgings .....2002..	X	47 156
	.....1997..	X	58 917
33211201	Nonferrous forgings .....2002..	X	7 291
	.....1997..	X	10 332
33120007	Steel bars, bar shapes, and plate (excluding castings, forgings, and fabricated metal products) .....2002..	X	32 102
	.....1997..	X	34 398
33120033	All other steel shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	13 791
	.....1997..	X	18 100
33142105	Copper and copper-base alloy rod, bar, and mechanical wire (including extruded and drawn shapes) .....2002..	X	56 908
	.....1997..	X	46 745
33142135	Copper and copper-base alloy pipe and tube (excluding castings, forgings, and fabricated metal products) .....2002..	X	22 896
	.....1997..	X	27 797
33142145	All other copper and copper-base alloy shapes and forms (excluding castings, forgings, fabricated metal products, refinery shaped rods, bars, mechanical wire, pipes, and tubes) .....2002..	X	15 528
	.....1997..	X	17 371
33100084	Other nonferrous shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	3 365
	.....1997..	X	N
00190060	Scrap, including iron, steel, aluminum and aluminum-base alloy (excluding home scrap) .....2002..	X	36 526
	.....1997..	X	D
33531225	Fractional horsepower electric motors and generators (less than 1 hp) .....2002..	X	D
	.....1997..	X	N
32221001	Paperboard containers, boxes, and corrugated paperboard .....2002..	X	11 503
	.....1997..	X	10 116
33999103	Gaskets (all types), and packing and sealing devices .....2002..	X	15 022
	.....1997..	X	16 493
00970099	All other materials and components, parts, containers, and supplies .....2002..	X	216 916
	.....1997..	X	246 773
00971000	Materials, ingredients, containers, and supplies, nsk .....2002..	X	209 587
	.....1997..	X	215 110

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.